

Questions and Answers About the Ergonomics Rule

September 2003

Purpose

Q. Why did L&I adopt an ergonomics rule?

A. L&I adopted the ergonomics rule in May 2000 because more than 50,000 men and women in our state suffer work-related musculoskeletal injuries every year, including such problems as carpal tunnel syndrome, low back strain and shoulder tendonitis. The causes of these injuries include heavy lifting, highly repetitive motions, awkward postures, or high hand force. Work-related musculoskeletal injuries account for nearly one-third of all workplace injuries claims filed each year and cost our state more than \$1 billion a year in medical expenses, wage replacement, reduced productivity and quality. They are among the most costly occupational injuries and illnesses, representing 40 percent of all claims costs. These injured workers suffer pain and financial hardship when they are unable to meet the physical demands of their jobs.

Many of these injuries are preventable. The ergonomics rule helps reduce injuries, save costs and protect jobs by requiring employers to identify hazardous jobs and take whatever steps are feasible to reduce employee exposure to these hazards.

Rule requirements

Q. What exactly is required by the ergonomics rule?

A. The ergonomics rule requires employers to identify hazardous jobs and take whatever steps are feasible to reduce employee exposure to these hazards. There are three basic steps employers must follow:

1. The rule describes 14 specific physical risk factors that require special attention. Employers must determine whether they have any of these 14 “caution zone” jobs. The rule has a checklist for ease of use.
2. If there are any caution zone jobs, the employer must do two things. First, he or she must provide basic ergonomics awareness education to employees with those jobs and to their supervisors. Second, the employer must evaluate the caution zone jobs more carefully to determine if they are hazardous enough to require corrective measures to reduce the hazards. The rule has a second checklist for this purpose.
3. If there are any jobs that meet the criteria for a “hazard,” the employer must take steps to reduce employee exposure below the hazardous level, but only to the degree that it is feasible to do so. Typically this requires some simple and straightforward changes, such as changing the handle on a tool or the height of a workbench or providing a mechanical hoist to help lift heavy boxes.

The rule does not prohibit workers from doing various jobs for more than a certain number of hours. While some jobs may be defined as hazards if they are done for more than four hours, the employer does not need to do anything that is not economically and technologically feasible. And the employer is never required to reduce any employee's hours of employment to comply with the rule.

Q. Does the rule affect every employer?

- A.** The rule applies only to employers with "caution zone" jobs – those jobs in which the employee's typical work includes the physical risk factors specified in the rule. Employers who have reasonably determined that they do not have caution zone jobs are not covered by the rule.

Rule enforcement

Q. Is the ergonomics rule in effect?

- A.** Yes, the requirements of the ergonomics rule phase in over several years, depending on the industry and the size of the business. For some companies, these requirements have already taken effect. However, [enforcement](#) of the rule has been delayed.

For example, the rule became effective for large companies in the 12 highest-risk industries on July 1, 2002, but L&I will not do any inspections or issue any citations for failure to comply with these requirements until at least July 1, 2004.

For most small employers, enforcement will not begin until July 2007.

Q. Is my business covered?

- A.** Businesses are covered by the rule if they have any "caution zone jobs." If you have caution zone jobs, you can find out where in the timeline your business falls by looking at the phase-in schedule in the ergonomics rule, [WAC 296-62-05160 When must employers comply with this rule?](#) (Keep in mind that actual enforcement will not begin until at least July 2004.) You may also call the nearest L&I office.

Q. Can an employer be fined for not complying with the ergonomics rule?

- A.** Yes. As with other WISHA standards, violations of the ergonomics rule are subject to possible citation and penalty. However, L&I will not do any inspections or issue any citations for failure to comply with the rule until at least July 1, 2004, when L&I may begin inspecting the businesses that were the first to be covered by the rule. For most small employers, enforcement will not begin until July 2007.

Q. What steps will L&I take to enforce the ergonomics rule consistently?

- A.** All safety and health inspectors will receive comprehensive training. In addition, WISHA senior staff in Central Office will review all cases for appropriate and consistent interpretation and application *before* citations are issued. L&I will also create an Ergonomics Enforcement Review Board that will be asked to review and give advice on citations that raise issues of feasibility.

Ergonomics and workplace safety

Q. What is ergonomics?

- A.** Ergonomics is the science and practice of designing jobs and workplaces to match the capabilities and limitations of the human body. Ergonomics helps employers to prevent injuries by identifying and fixing jobs and tasks in the workplace that pose a hazard for work-related musculoskeletal disorders.

Q. What are work-related musculoskeletal disorders?

- A.** Work-related musculoskeletal disorders, or WMSDs, are a number of physical conditions affecting muscles, tendons and joints and include back strain, tendonitis, and carpal tunnel syndrome. WMSDs occur when the physical demands of work cause damage to the body by overloading its muscles, tendons, nerves and joints.

Q. How will the ergonomics rule improve workplace safety?

- A.** The ergonomics rule targets workplace hazards that injure more than 50,000 Washington workers a year. It requires employers to find and fix hazards before workers become hurt. Reducing exposure to hazards such as heavy lifting or awkward postures can help prevent worker injuries. Here are some examples:
- A pipe manufacturer built low-cost carts in-house that reduced lifting and carrying and simplified handling of equipment and materials.
 - A lumber-products company eliminated high hand force by installing automatic board turners that prevented injuries and allowed workers to grade boards faster and more accurately.
 - A library made their own “mini-pallets” out of plywood to reduce lifting of book bins when they are moved. A simple two-wheeled hand truck slips under the mini-pallet to eliminate lifting and facilitate moving book bins.

Risk factors and hazards

Q. What is a WMSD risk factor?

- A.** WMSD risk factors are the requirements of jobs that may cause work-related musculoskeletal disorders. The WMSD risk factors covered by the ergonomics rule include awkward postures; high hand force; highly-repetitive motion; repeated impact; heavy, frequent or awkward lifting; and moderate-to-high hand-arm vibration. Not all known risk factors are covered by the rule. For example, whole-body vibration is not covered.

Q. What risk factors are covered by the rule?

- A.** There are 14 specific risk factors that are covered by the rule. Jobs with these risk factors are called “caution zone jobs.” For example, an employee is considered to be in a caution zone job if he or she works with the hands above the head or the elbows above the shoulders more than two hours per day, for more than one day a week and more than one week a year. Caution zone jobs are not prohibited, but they do carry some risk, and therefore, the employee(s) and supervisor must be given ergonomics awareness education. Employers must also evaluate caution zone jobs more carefully to determine whether the risks are great enough to be considered a WMSD hazard.

For information on caution zone jobs, please see [WAC 296-62-05105 What is a caution zone job?](#) You also may call an L&I office and request the L&I pamphlet, “Pocket Guide to Caution Zone Jobs.”

Q. What is a WMSD hazard? When does a caution zone job become a WMSD hazard?

- A.** Caution zone jobs with longer exposure, more intense exposure or a combination of risk factors are WMSD hazards. For example working with the hands above the head for more than two hours is a caution zone job but if it is done for more than four hours it is a hazard. Please see [WAC 296-62-05174 Appendix B](#) for a list of hazards covered by the rule. Employers must take steps to protect employees by reducing hazardous exposure to below the hazard level or to the degree technologically and economically feasible.

Q. What are some examples of how to fix WMSD hazards?

- A.** L&I recently launched its [Ergonomics Idea Bank](#) on the L&I ergonomics web site. It contains hundreds of examples and ideas for correcting WMSD hazards. Visit it frequently, as new ideas are added regularly. If you developed an idea for your company and want to share it with others, [submit it to the bank](#).

Costs and benefits of the rule

Q. How much will the rule cost to implement?

- A.** A complete analysis of the rule’s cost requires consideration of its overall economic impact, both benefits and costs. As required by law, the Department of Labor and Industries conducted a cost and benefit analysis as part of the rulemaking process. L&I concluded that the probable benefits of the rule are four times the probable costs. More specifically, for a total statewide annual investment of \$80 million, L&I has determined that employers will realize expected annual savings in excess of \$340 million. Please see the [Cost-Benefit Analysis](#) for complete information.

Q. Is it true there’s a study showing it will cost businesses \$725 million to implement the ergonomics rule in the first year alone?

- A.** There is a report claiming that the rule will cost \$725 million to implement, but L&I believes it is wrong. During the rule making process, business interests submitted an estimate of costs prepared by a California consulting firm, M.Cubed. As required by law, L&I evaluated this report and prepared a written response. L&I concluded the M.Cubed report was flawed in several ways:

1. It overestimated the number of jobs in Washington covered by the rule.

2. It relied upon cost estimates made by California employers for a California rule bearing little resemblance to the Washington rule.
3. The report incorrectly assumed every employer would have to hire an outside ergonomics consultant to figure out how to comply with the Washington rule.
4. The report counted costs for many things that are simply not required by the rule, for example \$150,000 for many nursing homes to purchase “ergonomic chairs,” equipment not required by the rule.
5. The M.Cubed report considered only the costs and ignored the benefits that come from using ergonomics to prevent injuries.

For a complete analysis of the M.Cubed report, please see Appendix D2-14 through D2-21 of the [Concise Explanatory Statement](#).

Specific jobs, tasks, and industries

Q. Does the ergonomics rule prohibit certain jobs?

- A.** No. There is nothing in the rule that prohibits any job. However, the rule does not allow employers to expose employees to WMSD hazards when it is feasible to fix them.

The rule requires employers to identify caution zone jobs. When these jobs exist, the affected employees and their supervisors must be given ergonomic awareness education. The employer must determine if the exposure to risk factors is above the hazard level, and if so the employer must take steps to protect the workers by reducing exposure below the hazard level or to the degree technologically and economically feasible.

Q. Does the rule prohibit “caution zone” jobs?

- A.** No. Caution zone jobs are not prohibited, but workers in those jobs and their supervisors must be given ergonomics awareness education. The caution zone job must also be evaluated to determine if the risk factor reaches the hazard level. If so, employee exposure must be reduced to below the hazard level or to the degree technologically and economically feasible. But even in this situation, the job is not prohibited.

Q. Does the rule prohibit drywallers from working more than two hours a day?

- A.** No. The rule does not restrict the number of hours an employee can work. However, the rule does not allow employers to expose employees to WMSD hazards when it is feasible to fix them. For example, if drywallers actually work with their hands above their heads for more than two hours in a day, they are in caution zone jobs. This is not prohibited. The rule requires that the employees and their supervisor be given ergonomics awareness education. If an employee is exposed to this type of work for more than four hours a day, then the job is a hazard and the employer will have to make an effort to protect the worker. But even in this situation, the employer is required only to make feasible changes. The job is not prohibited and the rule does not require that the hours a worker spends performing the job be reduced.

Q. Does the rule prohibit carpet layers from working more than two hours a day?

- A.** No. The rule does not restrict the number of hours an employee can work. However, the rule does not allow employers to expose employees to hazards when it is feasible to fix

them. For example, if carpet layers actually kneel for more than two hours, they are in caution zone jobs. This is not prohibited. The rule requires that the employees and their supervisor be given ergonomics awareness education. If an employee is exposed to this type of work for more than four hours a day, then the job is a hazard and the employer will have to make an effort to protect the worker. But even in this situation, the employer is required only to make feasible changes. The job is not prohibited and the rule does not require that the hours a worker spends performing the job be reduced.

Q. Does the rule prohibit a baseball pitcher from pitching more than two hours a day?

- A.** No. There is nothing in the rule that restricts the number of hours any employee can work. Additionally, baseball pitching does not generally have the WMSD risk factors that the rule identifies, e.g., awkward posture, high hand force, highly repetitive motion. Baseball pitchers may throw a ball repetitively, but such activity will not be in the caution zone, which is described as “using the same motions with little or no variation every few seconds” for more than two hours per day. Pitchers may grip the baseball with a lot of force, but not for the amount of time covered by the rule, especially considering the amount of time between pitches and between innings.

Q. Does the rule prohibit a baseball catcher from catching more than two hours a day?

- A.** No. The rule does not restrict the number of hours any employee can work. However, the rule does not allow employers to expose employees to WMSD hazards when it is feasible to fix them. If the job requires squatting for more than two hours per day it is a caution zone job. This is not prohibited. Squatting for more than four hours per day is a hazard, and the employer would have to take steps to protect the worker. A baseball catcher would have to be in the squatting position for more than four hours in a day to reach the hazard level. This is not going to happen, even in a six-hour double header. But even if it did, changes that were not feasible would not be required.

Q. Does the rule prohibit employees from working on their knees more than two hours a day?

- A.** No. The rule does not restrict the number of hours any employee can work. However, the rule does not allow employers to expose employees to WMSD hazards when it is feasible to fix them. The rule says that a worker “kneeling more than two hours total per day” is in a caution zone job. This is not prohibited. The rule requires that workers in those jobs and their supervisors be given ergonomics awareness education. If a worker is kneeling more than four hours a day, then the job is a hazard and the employer will have to make an effort to protect the worker. But even in this situation, the employer is required only to make feasible changes. The job is not prohibited and the rule does not require that the hours a worker spends performing the job be reduced.

Q. Does the rule prohibit employees from working with their hands above their head more than two hours a day?

- A.** No. The rule does not restrict the number of hours an employee can work. However, the rule does not allow employers to expose employees to hazards when it is feasible to fix them. The rule says that a worker “working with the hand(s) above the head, or the elbow(s) above the shoulder, more than two hours per day” is in a caution zone job. This is not prohibited. The rule requires that workers in those jobs and their supervisors be

given ergonomics awareness education. If a worker is working with the hand(s) above the head, or elbow(s) above the shoulder for more than four hours a day, then the job is a hazard and the employer will have to make an effort to protect the worker. However, even in this situation, the employer is required only to make feasible changes. The job is not prohibited and the rule does not require that the hours a worker spends performing the job be reduced.

Q. Does the rule prohibit employees from lifting more than 75 pounds?

A. No. The rule does not restrict an employee from doing a particular job. However, the rule does not allow employers to expose employees to WMSD hazards when it is feasible to fix them. The rule states that a worker “lifting an object weighing more than 75 pounds once a day” (for more than one day a week and more than one week a year) is in a caution zone job. This is not prohibited. The rule requires that workers in those jobs and their supervisors be given ergonomics awareness education. If frequent, heavy, or awkward lifting reaches the hazard level the employer must take steps to reduce it below the hazard level or to the degree technologically and economically feasible. However, even in this situation, the employer is required only to make feasible changes. The job is not prohibited and the rule does not require that the hours a worker spends performing the job be reduced.

Q. Does the rule prohibit employees from working with their neck or back bent more than 30 degrees?

A. No. The rule does not prohibit employees from doing a particular job. However, the rule does not allow employers to expose employees to hazards when it is feasible to fix them. If employees actually work with their neck or back bent more than 30 degrees for more than two hours total per day, they are in a caution zone job. This is not prohibited. The rule requires that workers in those jobs and their supervisors be given ergonomics awareness education. If a worker is working with his/her neck or back bent more than 30 degrees for more than four hours a day, then the job is a hazard and the employer will have to make an effort to protect the worker. But even in this situation, the employer is required only to make feasible changes. The job is not prohibited and the rule does not require that the hours a worker spends performing the job be reduced.

Q. Why is keyboarding covered by the rule? Doesn't a Mayo Clinic study say that keyboarding doesn't cause carpal tunnel syndrome?

A. There is strong scientific evidence that intensive keying for long periods of time can cause hand and wrist problems such as carpal tunnel syndrome. The ergonomics rule allows up to seven hours of intensive keying, as long as the wrists are not in awkward, uncomfortable positions. It allows four hours if the wrists are bent. This is consistent with the Mayo Clinic study, which found only a few cases of carpal tunnel syndrome in a small group of workers using keyboards less than seven hours a day (not counting those workers who may have been off work during the time of the study).

Q. Is using a computer mouse covered by the rule?

A. The rule does not specifically cover mouse use, but it does cover repetitive activities and awkward postures, which may be present when using a mouse. If those risk factors are present to a degree that causes the job to be in the caution zone the workers and supervisors must be given ergonomics awareness education and the employer must look at the job more carefully to see if is hazardous enough to require being fixed.

Q. Will the ergonomics rule force companies to lay off workers or reduce their hours?

- A.** The ergonomics rule does not restrict the number of hours workers can work. The rule requires that when WMSD hazards are found, they “must be reduced below the hazard level or to the degree technologically and economically feasible.”

Here is the exact wording of the ergonomics rule:

WAC 296-62-05130(5): This rule does not require an employer to control WMSD hazards by replacing full-time employees with part-time employees or otherwise reducing an individual’s hours of employment. If an employer has implemented all other technologically and economically feasible controls, and a WMSD hazard remains, the employer will be deemed in compliance with this subsection.

Q. How does the rule impact grocery stores?

- A.** In February 2002, L&I staff visited five large grocery stores and evaluated the typical work of grocery store employees for the purposes of advising the grocery industry on complying with the ergonomics rules. During these site visits, L&I ergonomics staff conducted thorough evaluations of the typical work of cashiers and staff who stock dairy, groceries and meat, and who work in the pharmacy and deli. In many cases, hazards were not found where the employers had expected they would be. Because of the variety in the tasks that grocery store employees typically perform, they were not likely to be performing repetitive tasks or working in awkward postures for significant lengths of time. Potential hazards existed in the storerooms where heavy boxes of meat and dairy products were routinely lifted and stacked; however, when these hazards existed, they were easily reduced by using simple solutions to modify the work.

Following these site visits, L&I sent a letter to the Washington Food Industry (WFI) on February 11, 2002 describing what modest steps would be necessary to assure that grocery store employers would be safely in compliance with the ergonomics rule. The letter states, “Where hazards were present or are likely to occur, this letter describes one or more options for reducing employee exposure below the hazard level. Employers who use one of these options will be in compliance with the rule and therefore will be in a ‘safe harbor.’”

In 2000, a WFI consultant prepared a report with a list of recommendations that went well beyond the requirements of the ergonomic rule. Based on this report, the WFI prepared a “cost estimator” and estimated that compliance with the ergonomics rule would cost as much as \$9,000 per employee in an average grocery store. The Director of Labor and Industries, Gary Moore, sent letters to the WFI on [November 27, 2001](#) and again on [January 3, 2002](#), explaining that the ergonomics rule *does not require* most of the items in the cost estimator. For example, the rule does *not* require replacements of checkstands, light fixtures, carts, chairs, or work stools, nor does it require special ergo mats, sinks, hand trucks, stools or ladders. L&I’s letters explained how and why the Washington Food Industry estimates were incorrect and urged the WFI not to advise employers they would have to spend money on things that are not required

in the ergonomics rule.

Q. Did L&I exempt Wal-Mart and Safeway from the requirements of the ergonomics rule?

- A.** No. The Department of Labor and Industries has not granted any exemptions to the ergonomics rule. Wal-Mart and Safeway requested ergonomic assessments of their distribution centers to determine how they would be affected by the rule. L&I representatives toured their facilities and explained to the companies what they would need to do to ensure that new distribution centers they were considering building in Washington would comply with the ergonomics rule.

L&I provides many employers with advice and information about what the rule requires, including information about whether a particular activity does or would comply with the rule. L&I has sometimes used the term “safe harbor” as a way of indicating to employers that they can feel safe in taking a particular action knowing that it will comply with the rule. In other words, the phrase “safe harbor” is a statement about compliance and in no way conveys any exemption. Similar advice and technical assistance have been made available to other employers who have requested it. Call L&I if you want to know more about this advice and assistance.

Terms and what they mean

Q. What does ‘technologically feasible’ mean?

- A.** A technologically feasible control is one that is either available on the market, can be conceived and manufactured or created using tools available to the employer, or is capable of being administratively implemented.

Q. What does ‘economically feasible’ mean?

- A.** Generally, economic feasibility considers both the costs of compliance and whether it is possible for the employer to either absorb or pass on the cost. An economically feasible control is one that is plainly available at minimal or no net cost or at a cost that does not threaten the viability of the business or operation, has been implemented by other similar size employers in the same industry (or with similar processes and comparable products), or one L&I can specifically determine can be implemented at little or no net cost or a cost that does not threaten the viability of the business.

Q. How does an employer know if something is economically or technologically feasible?

- A.** Employers are expected to make their own decisions about whether it is feasible to reduce exposures below the hazard level. If L&I disagrees the department will have to be able to show that its position is correct. Employers who would like assistance evaluating whether something is feasible may request a free consultation visit or other technical help from L&I. WISHA senior staff in Central Office will review all feasibility questions that arise from an inspection. In addition, an Ergonomics Enforcement Review Board will be created to review and advise L&I before it issues any citations where feasibility is an issue.

Assistance from L&I

Q. How can I get help in my business?

- A.** L&I offers [free consultations](#) and ergonomic assistance and will come to your workplace to help you evaluate jobs. Additionally, we offer workshops, publications, demonstration projects, checklists and educational materials (some in Spanish). Some of these materials are available on CD. Please contact L&I by telephone or visit L&I's [Ergonomics](#) or [Consultations](#) web pages.

Q. Who should I call if I don't know what to do?

- A.** Please call the L&I office in your area and ask for the Consultation Supervisor:

Island, San Juan, Skagit, Snohomish, and Whatcom counties	425-290-1431
King County	206-515-2800
Clallam, Jefferson, Kitsap, and Pierce counties	253-596-3917
Clark, Cowlitz, Grays Harbor, Klickitat, Lewis, Mason, Pacific, Skamania, Thurston, and Wahkiakum counties	360-902-5472
Adams--west side, Asotin, Benton, Chelan, Columbia, Douglas, Franklin, Grant, Kittitas, Okanogan, Walla Walla and Yakima Counties	509-886-6570
Adams--east side, Ferry, Garfield, Lincoln, Pend Oreille, Spokane, Stevens and Whitman counties	509-324-2600 or 509-324-2543